

PAT-NO: JP360055002A  
DOCUMENT-IDENTIFIER: JP 60055002 A  
TITLE: NOVEL CONTINUOUS POLYMERIZATION

PUBN-DATE: March 29, 1985

**INVENTOR-INFORMATION:**

NAME	COUNTRY
TSUBAKIMOTO, TSUNEO	
SHIMOMURA, TADAO	
IRIE, YOSHIO	

**ASSIGNEE-INFORMATION:**

NAME	COUNTRY
NIPPON SHOKUBAI KAGAKU KOGYO CO LTD	N/A

APPL-NO: JP58163168

APPL-DATE: September 7, 1983

INT-CL (IPC): C08F002/16 , C08F020/02

**ABSTRACT:**

PURPOSE: To improve the production rate and workability in the production of a crosslinked polymer, by effecting a radical aqueous solution polymerization which finely dividing, with a shearing force, a hydrated gel-like crosslinked polymer formed with the progress in polymerization and continuously discharging the formed polymer.

CONSTITUTION: A polymerization initiator and an aqueous solution of a monomer which, when polymerized in an aqueous solution, forms a hydrated gel-like polymer by the formation of a crosslinking structure are continuously fed to a vessel having a plurality of rotary agitator shafts. The radical aqueous solution polymerization is effected while the hydrated gel-like polymer formed with the progress in polymerization is being finely divided with a shearing force by the rotation of the agitator shafts. The formed divided

hydrated gel-like polymer is continuously discharged from the vessel. It is preferable that the aqueous monomer solution fed to the polymerization vessel has a concentration of 10-80wt%. It is necessary that the vessel has a plurality of rotary agitator shafts, and examples of these vessels include double-arm kneader and three-screw kneader.

COPYRIGHT: (C)1985, JPO&Japio

**PAT-NO:** JP401144404A  
**DOCUMENT-IDENTIFIER:** JP 01144404 A  
**TITLE:** PRODUCTION OF WATER-ABSORBING RESIN

**PUBN-DATE:** June 6, 1989

**INVENTOR-INFORMATION:**

NAME	COUNTRY
KIMURA, KAZUMASA	
HATSUDA, TAKUMI	
IRIE, YOSHIO	
SHIMOMURA, TADAO	

**ASSIGNEE-INFORMATION:**

NAME	COUNTRY
NIPPON SHOKUBAI KAGAKU KOGYO CO LTD	N/A

**APPL-NO:** JP63196026

**APPL-DATE:** August 8, 1988

**INT-CL (IPC):** C08F002/10

**US-CL-CURRENT:** 385/65

**ABSTRACT:**

**PURPOSE:** To obtain a water-absorbing resin having high water-absorption ratio, low content of water-soluble component and residual monomer and high safety, by polymerizing a monomer containing an acid group and having a neutralization ratio falling within a specific range.

**CONSTITUTION:** A monomer component containing  $\geq 50\text{mol}\%$  of a monomer having acid group [e.g., (meth)acrylic acid or 2-acrylamide-2-methylpropanesulfonic acid] wherein  $10\text{--}50\text{mol}\%$  of said acid group-containing monomer is neutralized (preferably a monomer component containing  $0.001\text{--}5\text{mol}\%$  of a crosslinkable monomer having  $\geq 2$  polymerizable double bonds) is polymerized in a reactor having plural

rotary stirring shafts furnished with stirring blades to obtain the objective water-absorbing resin. A resin having further improved water-absorption ratio can be produced by adding one or more neutralizing agents selected from a basic substance and a weak acid salt to the obtained hydrated polymer gel to raise the neutralization ratio of the polymer to  $\geq 50\text{mol}\%$ .

COPYRIGHT: (C)1989,JPO&Japio